



## Environmental Services of America, Inc.

### Tri-S Division

205 Main Street  
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April 20, 1994

Town of Stratton  
Attn: Pat Coolidge  
P.O. Box 166  
West Wardsboro, VT 05360-0166

HAZARDOUS MATERIALS  
MANAGEMENT DIVISION

Apr 22 10 03 AM '94

RE: Environmental Site Investigation Report of The Town of Stratton Highway  
Garage, Mountain Road, Stratton, Vermont DEC Site #93-1495

Dear Ms. Coolidge

Enclosed please find the above-referenced report for your review. Also enclosed you will find 2 forms requiring your signature upon approval of this report. Please sign one form and return it to us in the self addressed, stamped envelope provided for your convenience. The second copy is for your records.

As soon as we receive this form, a copy of the above-referenced report will be mailed to the recipient noted on the form.

Should you have any questions please call me at 254-3677.

Sincerely,  
ENSA TRI-S, Inc. Environmental Consulting Division

Bruce Tease, Ph.D.  
Project Manager

Enclosures

~~cc: Chuck Schwer, State of Vermont DEC~~

BET:cls

\\400\approval.let

Offices Nationwide

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# Environmental Services of America, Inc.

RECEIVED APR 28 1994

## Tri-S Division

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P.O. Box 1760  
Brattleboro, VT 05302  
Phone: (802) 254-3677  
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Fax: (802) 254-7630

April 20, 1994

### CLIENT

Town of Stratton  
Attn: Pat Coolidge  
P.O. Box 166  
West Wardsboro, Vt 05360-0166

### JOB #

400

### NAME OF REPORT & DATE

"Environmental Site Investigation Report, dated April 20, 1994"

I have read the above-referenced report and hereby authorize TRI-S, Inc. to distribute copies of this report to the following parties:

Chuck Schwer, Supervisor  
VT DEC SMS HMMD  
103 South Main Street/West Bldg.  
Waterbury, VT 05671-0404

Please sign below and return to us, as acknowledgement that you approve of this report in its entirety.

Thank you.

*Patricia Coolidge - Town Clerk*  
CLIENT SIGNATURE

*April 26, 1994*  
DATE

HAZARDOUS MATERIALS  
MANAGEMENT DIVISION

May 4 10 44 AM '94

RECEIVED  
MAY 10 1994

MAY 4 10 45 AM '94

**Environmental Site Investigation Report  
of  
The Town of Stratton Highway Garage  
Mountain Road  
Stratton, VT  
DEC Site #93-1495**

***Prepared for***

Town of Stratton  
Attn: Pat Coolidge  
PO Box 166  
West Wardsboro, VT 05360-0166

***by***

Environmental Services of America, Inc.  
TRI-S, Inc. Environmental Consulting Division  
205 Main Street  
Brattleboro, VT 05301

April 20, 1994

## EXECUTIVE SUMMARY

This report describes subsurface investigation work required by the Sites Management Section (SMS) of the Vermont Department of Environmental Conservation (VT DEC) at the Stratton Town Garage property located on Mountain Road in Stratton, Vermont. The environmental investigation was requested by the SMS following a review of tank pull forms and a subsurface assessment report prepared by Griffin International, Inc. of Williston, VT that indicated a release of petroleum product (diesel) had possibly occurred from overfills or via feed lines leading to the two underground storage tanks that were removed from the site on October 25, 1993.

Work conducted during the subsurface investigation included the advancement of seven (7) soil borings in the immediate vicinity of the source area, head space screening of split spoon soil samples for volatile organic compounds (VOCs), installation of groundwater monitoring wells in four of the above noted bore holes, and analysis of groundwater samples for Volatile Organic Compounds by GC/MS via EPA Method 8240 and Total Volatile Hydrocarbons. The samples were analyzed by the State Department of Environmental Conservation laboratory.

Head space screening of the split spoon soil samples revealed the presence of elevated levels (maximum reading of 520.0 ppm) of volatile organic compounds (VOCs) in the samples collected from the soil boring advanced between the fuel pump and the garage building. This boring was converted into monitoring well ST-3. A sample collected from the 0-2 foot depth zone at soil boring SB-2 contained 85.0 ppm of VOCs. VOC levels in samples collected from the remaining borings ranged from 0.0 ppm to 7.1 ppm.

Analytical testing of groundwater samples collected from the monitoring wells revealed the presence of petroleum related compounds in the groundwater sample collected from monitoring well ST-3 including BTEX and Total Volatile Hydrocarbon (TVH) compounds. Lower levels of TVH were detected in the groundwater sample collected from the monitoring well (ST-4) located near the drinking water well. No compounds tested for were detected in the sample collected from the drinking water well. Low levels of 1,1,1 Trichloroethane (7.0 ug/l) were detected in the sample collected from monitoring well ST-2.

Depth to groundwater was approximately 3.72 feet to 4.62 feet below ground surface and groundwater flow was in a southwesterly direction.

Conclusions and recommendations are presented at the end of this report.

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## 1. Introduction

Environmental Services of America, TRI-S, Inc. Environmental Consulting Division (TEC) was contracted by the Town of Stratton, Vermont to conduct subsurface environmental investigations at the Stratton Highway Garage property located on Mountain Road (see Site Locus in Appendix A). This work was performed pursuant to the following tasks requested by the Sites Management Section (SMS) of the Vermont Department of Environmental Conservation (VT DEC) in their letter dated November 19, 1993:

*Determine the degree and extent of contamination, if any, to the groundwater. If soil is found to contain evidence of contamination at the water table, then a sufficient number of monitoring wells should be installed in locations which will adequately define the severity of contamination at the site. All groundwater samples taken should be analyzed using EPA Methods 8020 and Total Petroleum Hydrocarbons (TPH).*

*Perform an assessment of the site to determine the potential for sensitive receptors to be impacted by the contamination. This should include nearby surface water including Ball Mountain Brook and the nearby unmarked pond/wetland, and any public or private drinking water wells which are located within the vicinity of the site. Of particular concern to the SMS is private wells #64 and #39 as well as the onsite bedrock well. If the groundwater has been impacted, then please have the onsite bedrock well sampled. If any other water supplies appear at risk from this contamination, they should also be sampled and analyzed using EPA 8020 and TPH.*

*Develop a plan to treat and/or monitor the 70 cubic yards of petroleum contaminated stockpiled soils. The soils must be located in an area such that they have a low potential to impact nearby receptors. They must also be properly encapsulated in plastic. If the soils are to be moved offsite, the SMS or UST Program must grant permission prior to their transport.*

*Submit to the SMS a summary report which includes the plan for the stockpiled soils and outlines the work performed to determine impact to groundwater and sensitive receptors as well as providing conclusions and recommendations. Included should be detailed analytical data, site map showing the location of the stockpiled soils, and a groundwater contour map if monitoring wells are installed.*

On January 14, 1994, the SMS approved the TEC Work Plan and offered assistance in the collection and analysis of all samples collected at the site. It was later determined that TEC would collect the samples and that the DEC laboratory would perform the analyses which included Volatile Organic Compounds via EPA Method 8240

and Total Volatile Hydrocarbons.

## **2. Overview of Past Environmental Investigations**

On October 25, 1993, a 2000 gallon and 1000 gallon diesel underground storage tanks (UST) were excavated and removed from the subject property by town highway department employees. A site assessment and tank pull forms were completed by Griffin International, Inc. of Williston, VT. A copy of this closure report is included in Appendix B.

The report concluded that both USTs were in good condition and that the VOCs encountered in the UST pit soils were limited to the 2000 gallon UST pit and that the VOC levels ranged from 4 ppm to 54 ppm. Approximately 70 cubic yards of soil was stockpiled and polyencapsulated on-site in order to accommodate the installation of a 5000 gallon UST in the vicinity of the former 2000 gallon UST. It is not known if all the soil that was excavated to make room for the 5000 gallon UST was contaminated since groundwater was reported to be at approximately 6 feet below the ground surface. The tank closure report noted that no visible signs of groundwater contamination from petroleum hydrocarbons were evident. The report concluded that, "The contamination detected is assumed to have been caused from either overfills during the fueling process or a small leak in the piping leading from the tanks to the pumps."

The report stated that the native soil encountered beneath the 2000 gallon UST consisted of, "... coarse sands and gravel to a depth of 3 feet, bank run gravel/native material to a depth of 6 feet and moist silty clay to a depth of 12 feet, which was the limit of excavation."

On December 16, 1993, The SMS received the TEC Work Plan which outlined the approach to be taken in performing the tasks requested by the SMS at the subject property. On January 14, 1994, the SMS approved the Work Plan.

## **3. Subsurface Investigations**

### **3.1 Soil Borings**

On February 11, and 25, 1994, a total of seven (7) soil borings were advanced in the immediate vicinity of the UST area by T&K Drilling of Troy, NH, under the direction of TEC. Split spoon soil samples were collected at the surface and at two to five foot intervals into the groundwater table. The drilling conditions were very difficult due to a snow storm and the presence of gravel and cobbles which greatly slowed the drilling process.



The groundwater flow direction was difficult to estimate due to the site topographic relief which was contrary to regional topography and surface drainage patterns that appeared to be trending in an easterly direction. The site slopes in a westerly direction towards what appeared to be a small wetlands area located in the southwest corner of the site. Therefore, additional soil borings were advanced to help assess the direction of groundwater flow (by monitoring for VOC contamination in split spoon soil samples).

Four soil borings were advanced on February 11, 1994. Monitoring wells were installed in three of the bore holes. Because of the difficult drilling conditions and limited day light, a second day was required to complete the drilling. On February 25, 1994, three soil borings were advanced east and north of the UST area. One monitoring well was installed in the bore hole closest to the site's drinking water well.

The locations of the monitoring wells and soil borings not emplaced with wells are shown on the Groundwater Potentiometric Map included in Appendix B.

### **3.2 Split Spoon Soil Sampling and Field Screening**

Split spoon soil samples were screened for volatile organic compounds (VOC) using a Thermo Environmental Instruments Inc. Organic Vapor Meter (OVM) Model 580B calibrated to 250 ppm of Isobutylene span gas. This meter is capable of detecting VOC concentrations to a limit of 0.1 ppm. It should be noted that depending upon the compound(s) of interest, the direct readings from the OVM may or may not reflect representative levels of contamination. According to the manufacture's suggestion, direct readings should be adjusted by multiplying by a factor of 0.5 when reference to Benzene is desired.

Head space screening of the split spoon soil samples revealed the presence of elevated levels (maximum reading of 520.0 ppm) of volatile organic compounds (VOCs) in the samples collected from the soil boring advanced between the fuel pump and the garage building. This boring was converted into monitoring well ST-3. A sample collected from the 0-2 foot depth zone at soil boring SB-2 contained 85.0 ppm of VOCs. VOC levels in samples collected from the remaining borings ranged from 0.0 ppm to 7.1 ppm. VOC screening results (direct readings) are presented on the Soil Boring/Monitoring Well Logs in Appendix C.

### 3.3 Soil Conditions

The soil conditions encountered during the advancement of the soil borings consisted of fine to coarse grained sands and dark brown silt at the 0-2 foot depth range. Medium to coarse grained sands and gravel with cobbles were encountered at the 5-7 foot depth range. Tightly packed silt, fine grained sand with trace gravel were encountered at the 10-15 foot depth range. Wet soils were encountered at the 5-7 foot depth range.

### 3.4 Site Hydrology

The depth to groundwater was measured from the top of the PVC well pipe and well elevations were determined by survey methods on March 8, 1994, by TEC personnel. Groundwater flow was determined to be in a southwesterly direction. A Groundwater Potentiometric Map is included in Appendix B.

Depth to groundwater from the PVC well head and groundwater potentiometric readings are summarized in the following table.

**Groundwater Potentiometric Chart for March 8, 1994**

Wells	ST1	ST2	ST3	ST4
Top of PVC	99.13	99.23	99.55	99.62
Groundwater elevation	94.51	95.23	95.48	95.90
Depth to Groundwater	4.62	4.00	4.07	3.72
Top of PVC and groundwater elevation readings are measured in feet from an arbitrary datum point				

The Hydraulic Gradient from monitoring wells ST-4 to ST-1 was determined to be approximately 0.02 cm/cm. Based on a Hydraulic Conductivity value of  $10^{-1}$  cm/sec for medium to coarse grained sands and gravel, and an effective porosity estimate of 30%, the groundwater transport velocity in the vicinity of the contaminated area of the site was approximated by using the following variation of Darcy's Equation:

$$\begin{aligned}
 \pi (1/4)^2 &= 3.14 \text{ in}^2, \frac{1 \text{ ft}^2}{144 \text{ in}^2} \times \frac{8 \text{ ft}}{1} \\
 0.16 \text{ ft}^2 & \times \frac{3.14 \text{ in}^2 (8 \times 12)}{231 \text{ in}^3} = 301 \text{ in}^3 \\
 301 \text{ in}^3 & \times \frac{1 \text{ gal}}{231 \text{ in}^3} = 1.3 \text{ gallons}
 \end{aligned}$$

$$GW_{vel} = \text{Hydraulic Conductivity} \times \text{Hydraulic Gradient/Effective Porosity}$$

**For sand and gravel**

$$GW_{vel} = 10^{-1} \text{ cm/sec} \times 0.02 \text{ cm/cm}/0.30$$

$$GW_{vel} = 6.7 \times 10^{-3} \text{ cm/sec}$$

$$GW_{vel} = 5.8 \text{ m/day}$$

**3.5 Groundwater Sampling and Analysis**

On March 8, 1994 following the removal of three well volumes, samples from the four groundwater monitoring wells and the site drinking water well were collected and preserved in accordance with State of Vermont sampling protocol, and analyzed for Volatile Organic Compounds via EPA Method 8240 and Total Volatile Hydrocarbons.

A distinct petroleum odor was detected in the split spoon soil samples collected during the boring of ST-3 and during groundwater sample collection. Monitoring well gauging and sampling information are presented in Appendix D.

Groundwater samples were submitted on March 9, 1994, to the DEC laboratory located in Waterbury, Vt. The decision to analyze for the above noted compounds was made based on the guidance from the laboratory personnel who stated that the laboratory is set up for these analyses which are more comprehensive than those originally proposed. The DEC laboratory performed the testing without charge.

Analytical testing of groundwater samples collected from the monitoring wells revealed the presence of petroleum related compounds in the groundwater sample collected from monitoring well ST-3 including Benzene, Toluene, Ethyl benzene, and Xylene (BTEX) and Total Volatile Hydrocarbon (TVH) compounds. Lower levels of TVH were detected in the groundwater sample collected from the monitoring well (ST-4) located near the drinking water well. No compounds tested for were detected in the sample collected from the drinking water well. Low levels of 1,1,1 Trichloroethane (7.0 ug/l) were detected in the sample collected from monitoring well ST-2.

A summary of the compounds detected in the groundwater samples analyzed is provided in the following table:

**Analytical Results of Groundwater Samples Collected on March 8, 1994**  
(values are recorded in ug/l)

Compound	ST-1	ST-2	ST-3	ST-3 duplicate	ST-4	drinking water well
1,1,1 Trichloroethane	ND	7.0	ND	ND	ND	ND
Total Volatile Hydrocarbons	ND	ND	51,100	19,600	134	ND
Benzene	ND	ND	ND	5.0	ND	ND
Toluene	ND	ND	2,300	2,000	ND	ND
Ethyl benzene	ND	ND	2,175	1,950	ND	ND
Xylenes	ND	ND	8,350	8,300	ND	ND
Total BTEX	N/A	N/A	12,825	12,255	N/A	N/A

Full laboratory data sheets and Chain-of-Custody statement are included in Appendix E.

#### 4. Risk Evaluation

Analytical results indicated the presence of petroleum related BTEX compounds in the groundwater sample collected from monitoring well ST-3. Elevated levels of Total Volatile Hydrocarbons (TVH) were also detected in this sample. Lower levels of TVH were detected in the sample collected from ST-4. Low levels of 1,1,1 Trichloroethane were detected in the sample collected from ST-2.

Based on the UST closure report and information obtained from site personnel, several incidents of overspills of diesel fuel at the pump dispenser have occurred. It was reported that the fuel pump had a substantial leak that required repair. Following the removal of the two diesel USTs, no evidence of a tank release of product was noted according to the Griffin International, Inc. report. All of the VOCs detected following UST excavation were associated with the 2000 gallon diesel UST. This tank was located immediately south of the pump dispenser.

The above information suggests that the source of petroleum related contamination detected at the site appears to be the fuel pump and that the releases associated with fuel dispensing have migrated to the shallow groundwater table. The low levels of Benzene detected in the groundwater sample collected from ST-3 is not indicative of an ongoing

release of product. The presence of Toluene, Ethyl benzene, and Xylenes at concentrations above the Vermont Health Advisory levels in a groundwater sample collected from a monitoring well located within 60 feet of an on-site drinking water well poses a potential risk to occupants of the town garage. No BTEX compounds were detected in the groundwater sample collected from ST-4 but the presence of 134 ppm of TVH in this sample suggests that diesel fuel contamination extends horizontally towards the drinking water well.

The presence of 1,1,1 Trichloroethane in the groundwater sample collected from ST-2 may have originated from the on-site release of small amounts of degreasing solvent(s) to the site soils. The presence of tightly packed silt at the 13-15 foot depth range during the soil boring for ST-1, may serve as a confining layer to vertical migration of this compound; the well screens were set into this silt layer.

While considerable snow depth prevented its definitive identification, a wetlands area appears to exist hydrologically downgradient, approximately 200 feet, from the diesel UST. No petroleum related compounds were detected, however, in the groundwater sample collected from ST-1. It is possible, however, that the plume of migration may extend beneath the site garage building. If this is so, the considerable groundwater velocity estimated for the site, would most likely transmit petroleum related compounds to this sensitive environmental receptor.

## **5. Treatment Plan for Stockpiled Contaminated Soils**

According to the Griffin International, Inc. UST closure report, 70 cubic yards of petroleum contaminated soils have been stockpiled immediately north of a salt storage shed at the site. The location of these soils could not be confirmed during the period of this environmental investigation due to the snow covered site conditions. These soils may be located immediately upgradient of a wetlands area.

TEC proposes that a sufficient number of soil samples should be collected and screened with a PID for VOCs and that a composite sample be analyzed to determine the most suitable disposal location for this material. The soil pile should be relocated to a more secure area on-site if it is confirmed that wetlands are located in this area.

## 6. Conclusions

TEC makes the following conclusions:

### Determination of the Degree and Extent of Contamination at the Subject Property

Based on the field screening of soil samples and analytical results obtained to date, soil contamination appears to extend in a radius approximately 20 feet from the fuel pump. Petroleum related contamination was detected in two of the groundwater monitoring wells sampled. The chlorinated hydrocarbon, 1,1,1 Trichloroethane was detected in the groundwater sample collected from ST-2 at level well below the 200 ppm Vermont Health Advisory level.

### Potential for Off-Site Contaminant Migration

Based on the analytical laboratory testing and hydrological information obtained to date, migration of petroleum related compounds does not appear to have been significant. No petroleum or chlorinated solvent related contamination was detected in the downgradient monitoring well (ST-1).

### Potential for On-site Migration of Contamination from an Off-site Source

Based on the rural setting surrounding the subject property, the potential risk of on-site migration of contamination from an off-site source appears to be very low.

### Need for Additional Assessment and/or Testing

Based on the presence of petroleum related compounds in groundwater above the Vermont Health Advisory levels at a property with an on-site drinking water well, additional monitoring and/or remediation is warranted at the subject property.

## 7. Recommendations

TEC recommends that the contaminated soil stockpiled at the subject property be screened for VOCs in the spring of 1994. A total of 12 discrete soil samples should be collected from 1-4 feet within the soil pile and screened for VOCs using a PID. Based on the level of contamination present, a decision regarding the disposal of this soil can be made. Since a maximum of only 54 ppm of VOCs were detected during UST excavation, according to the Griffin International, Inc. closure report, it may be possible that VOCs levels are low enough for soils to be spread in a secure location on-site. It may be necessary to re-screen the soil pile in the fall of 1994 if VOCs levels are above 10 ppm.

TEC recommends that the identification of the wetlands area be confirmed. If this area proves to be a sensitive receptor, the soil pile should be relocated on-site to a more secure area.

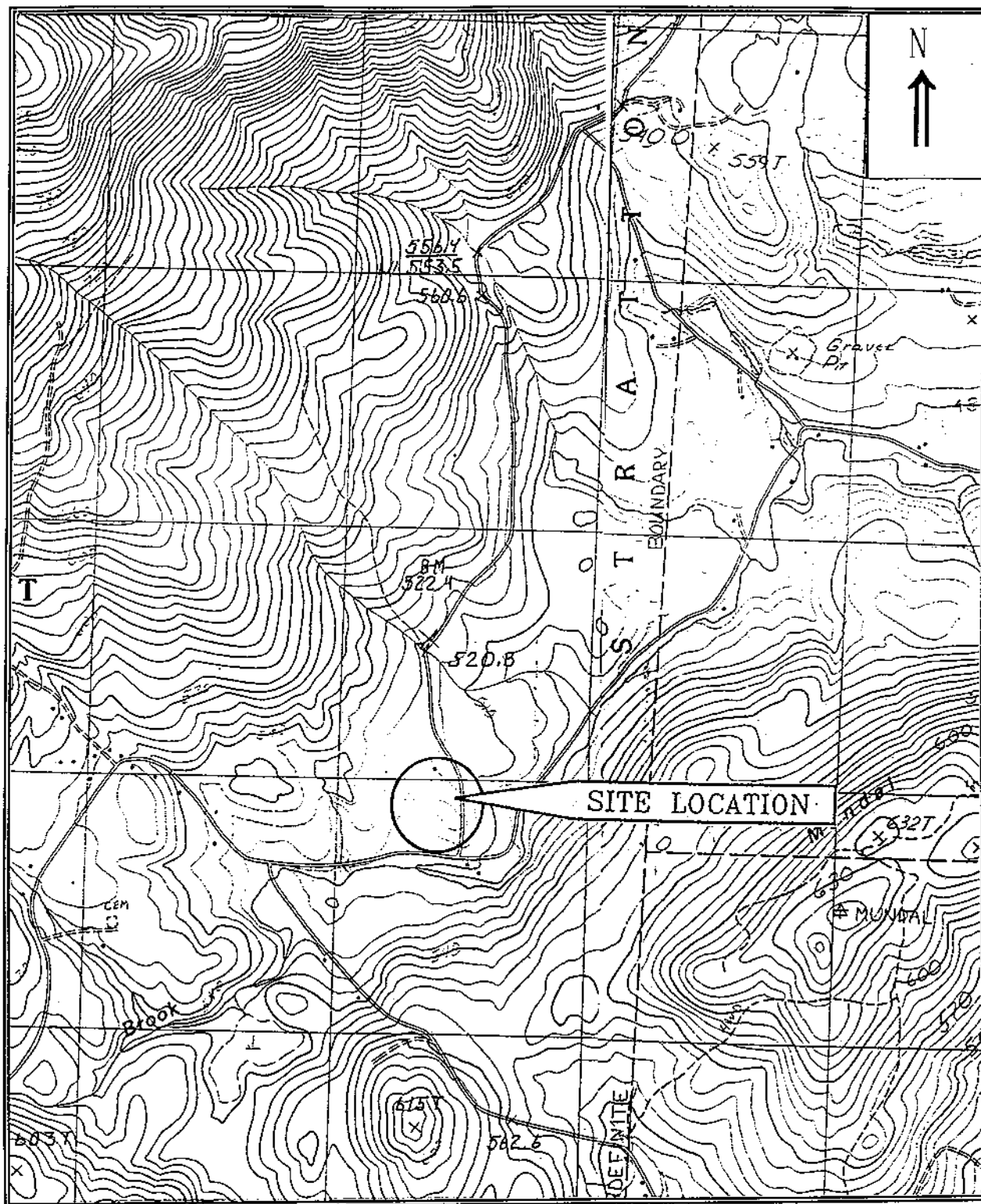
TEC recommends the excavation of surface soils in the vicinity of the diesel fuel pump and garage building. Removal of diesel contaminated soil will greatly help minimize the infiltration of petroleum related compounds into the shallow groundwater table.

This report must be submitted to the VT SMS of the Department of Environmental Conservation located on 103 South Main Street/West Building, Waterbury, VT 05671-0404. Upon review and approval by the site owner/representative, TEC can submit this report to the state.

*Appendix A*

*Site Location Map*





Site Locus	USGS Topographic Map Stratton, Mtn., VT 1986 Scale 1:24,000	Stratton Highway Garage Mountain Road Stratton, VT
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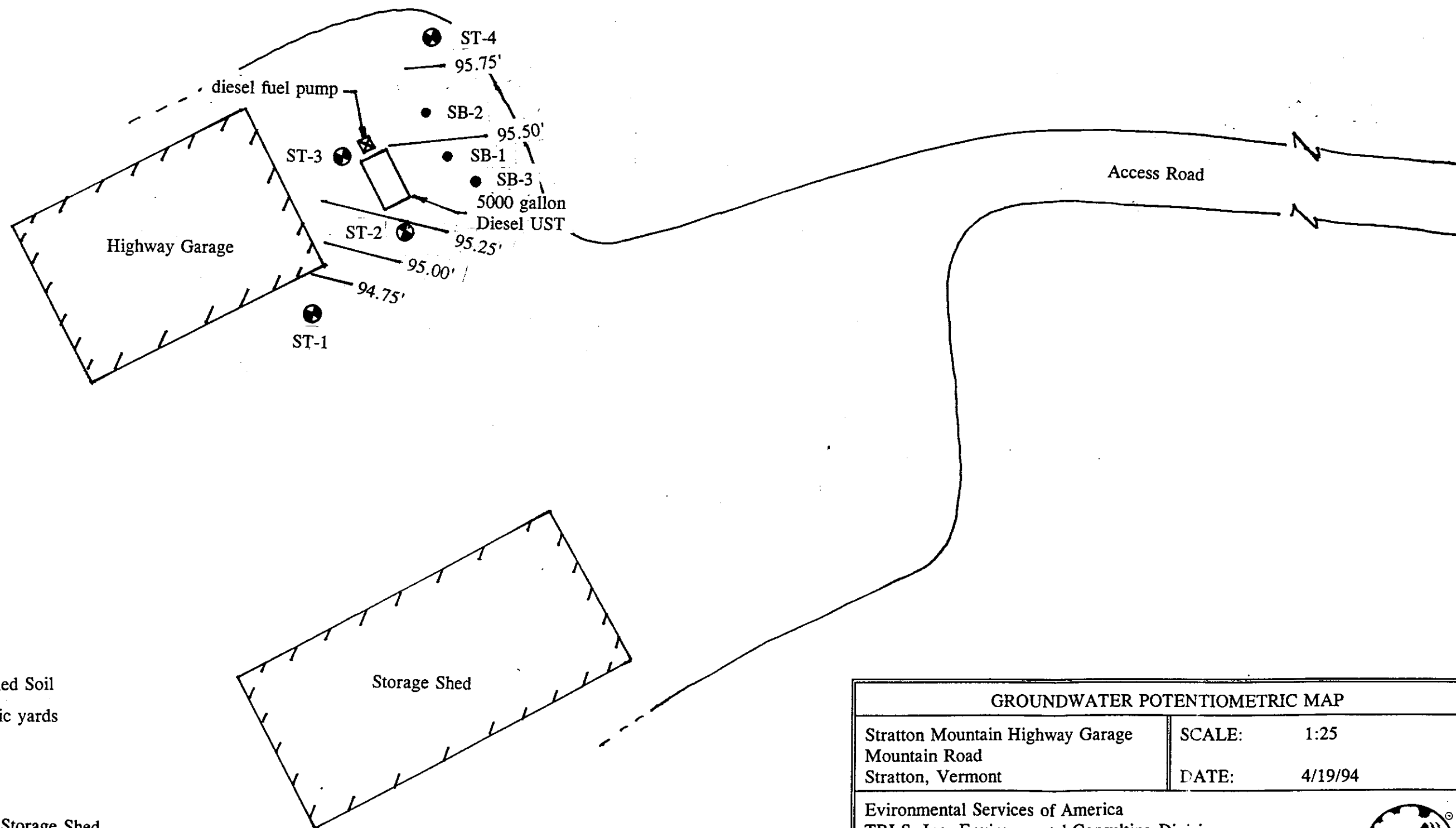
*Appendix B*

*Groundwater Potentiometric Map*

Mountain Road



⊙ Drinking Water Well



# GROUNDWATER POTENTIOMETRIC MAP

Stratton Mountain Highway Garage  
Mountain Road  
Stratton, Vermont




SCALE: 1:25  
DATE: 4/19/94

Environmental Services of America  
TRI-S, Inc. Environmental Consulting Division  
205 Main Street  
Brattleboro, Vermont



*Appendix C*  
*Soil Boring/Monitoring Well Logs*

**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>400</u> Date: <u>2/11/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>MW-1</u> Sheet <u>1</u> of <u>1</u>					<div style="display: flex; justify-content: space-between;"> <div>  <p>GARAGE</p> </div> <div> <p>SITE LOCUS</p> <p> UST</p> </div> </div> <p style="text-align: center;"> MW-1</p>				
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram	
	0-6	6-12	12-18	18-24					
0-2		off	flights		-	4.2	coarse to medium grained sands		
5-7	20	24	22	26	20	2.2	coarse to medium grained sand w/ gravel and cobbles		
10-12	16	27	33	24	20	1.2	moist fine grained silty sand w/ trace gravel		
13-15	16	30	50	60	18	1.0	wet tightly packed silt w/ trace gravel		


Drilling Method: HSA  
 Total Well Depth: 13'  
 Groundwater Depth: 4.62'  
 PVC elevation: \_\_\_\_\_

Screen Diameter: 2" Length: 10'  
 Riser Diameter: 2" Length: 3'  
 Slot Size: 10  
 Ground Elevation: \_\_\_\_\_

Notes:

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
5. HSA = Hollow Stem Auger, AR = Air Rotary

**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

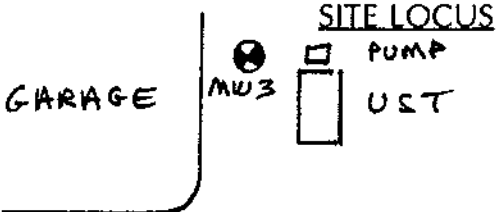

Project #: <u>400</u> Date: <u>2/11/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>MW-2</u> Sheet <u>1</u> of <u>1</u>						<b>SITE LOCUS</b> 		
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0-2		off	flights		-	2.8	fine grained silty sand and trace gravel	
5-7	13	22	60	14	20	0.9	tightly packed medium to coarse grained silty sand with trace gravel and cobbles	
7-9	12	25	22	34	18	2.0	10" wet medium to coarse grained silty sand	
							8" wet medium to coarse grained silty sand w/ trace gravel	
10-12	14	14	16	28	20	1.8	wet tightly packed medium to fine grained silty sand w/ trace gravel	
13-15	70	-	-	-		3.8	wet coarse to medium grained silty sand w/ trace gravel	

Drilling Method: <u>HSA</u> Total Well Depth: <u>13'</u> Groundwater Depth: <u>4.00'</u> PVC elevation: _____	Screen Diameter: <u>2"</u> Length: <u>10'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____
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**Notes:**

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
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**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

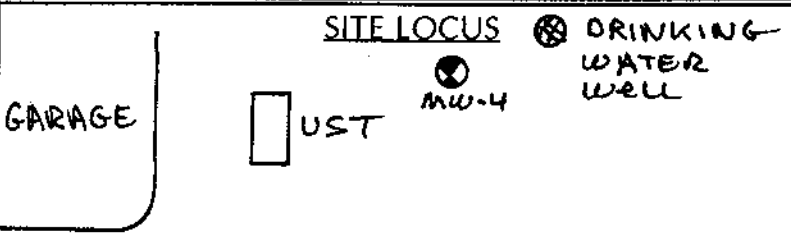
Project #: <u>400</u> Date: <u>2/11/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>MW-3</u> Sheet <u>1</u> of <u>1</u>						<b>SITE LOCUS</b> 		
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0-2		off	flights		-	18.0	dark brown sandy silt	
3-4		off	flights		-	116.0	brown sandy silt	
							strong petroleum odor	
4		off	flights		-	520.0	brown sandy silt	
							strong petroleum odor	
5-7	9	21	18	88	6	280.0	moist brown silt and fine grained sand w/ strong petroleum odor	
10-12	14	21	20	30	16	31.0	wet fine grained silty sand w/ trace gravel	
							refusal @ 12 ft	

Drilling Method: <u>HSA</u> Total Well Depth: <u>12'</u> Groundwater Depth: <u>4.07'</u> PVC elevation: _____	Screen Diameter: <u>2"</u> Length: <u>10'</u> Riser Diameter: <u>2"</u> Length: <u>2'</u> Slot Size: <u>10</u> Ground Elevation: _____
--	---

**Notes:**

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
5. HSA = Hollow Stem Auger, AR = Air Rotary

**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>400</u> Date: <u>2/25/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>MW-4</u> Sheet <u>1</u> of <u>1</u>						<b>SITE LOCUS</b>  GARAGE      UST      MW-4      DRINKING WATER WELL		
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram
	0-6"	6-12"	12-18"	18-24"				
0-2		off	flights		-	3.1	dark brown silt and fine to medium grained sand	
5-7	6	16	17	23	18	2.3	moist medium to coarse grained sand and gravel with cobbles	
10-12	8	20	30	100*	16	7.1	wet tightly packed silt and fine grained sand	
							*refusal	

Drilling Method: <u>HSA</u> Total Well Depth: <u>13'</u> Groundwater Depth: <u>3.72'</u> PVC elevation: _____	Screen Diameter: <u>2"</u> Length: <u>10'</u> Riser Diameter: <u>2"</u> Length: <u>3'</u> Slot Size: <u>10</u> Ground Elevation: _____
--	---

**Notes:**

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
5. HSA = Hollow Stem Auger, AR = Air Rotary



**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>400</u> Date: <u>2/11/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>SB-1</u> Sheet <u>1</u> of <u>1</u>						<b>SITE LOCUS</b> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 80px; height: 80px; margin-right: 10px; position: relative;"> <span style="position: absolute; top: 10px; left: 10px; font-size: 10px;">GARAGE</span> </div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto; position: relative;"> <span style="position: absolute; top: -5px; left: 5px; font-size: 8px;">UST</span> </div> <div style="font-size: 20px; margin: 0 auto;">●</div> <div style="font-size: 12px; margin: 0 auto;">SB-1</div> </div> </div>		
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0-2		off	flights		-	2.2	dark brown silt and fine grained sand	
5-7	16	23	14	24	20	0.3	2" coarse grained sand 6" medium to coarse grained silty sand some cobbles	
7-9	25	31	42	14	20	0.0	wet fine to medium grained silty sand	

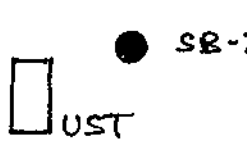
Drilling Method: HSA  
 Total Well Depth: \_\_\_\_\_  
 Groundwater Depth: \_\_\_\_\_  
 PVC elevation: \_\_\_\_\_

Screen Diameter: \_\_\_\_\_ Length: \_\_\_\_\_  
 Riser Diameter: \_\_\_\_\_ Length: \_\_\_\_\_  
 Slot Size: \_\_\_\_\_  
 Ground Elevation: \_\_\_\_\_

**Notes:**

1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
5. HSA = Hollow Stem Auger, AR = Air Rotary

**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>400</u> Date: <u>2/25/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>SB-2</u> Sheet <u>1</u> of <u>1</u>					<b>SITE LOCUS</b> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; padding: 5px;">GARAGE</div> <div style="text-align: center;">  </div> </div>				
Depth	Blow Counts				Rec. (in.)	OVM: (ppm)	Soil Characterization	As Built Diagram	
	0-6	6-12	12-18	18-24					
0-2		off	flights		-	85.0	dark brown silt and fine grained sand		
							refusal @ 2-3 feet		
Drilling Method: <u>HSA</u> Screen Diameter: _____ Length: _____ Total Well Depth: _____      Riser Diameter: _____ Length: _____ Groundwater Depth: _____      Slot Size: _____ PVC elevation: _____      Ground Elevation: _____									

- Notes:
1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
  2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
  3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
  4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
  5. HSA = Hollow Stem Auger, AR = Air Rotary

**TRI-S, INC. ENVIRONMENTAL CONSULTING**  
**SOIL BORING/MONITORING WELL LOG**

Project #: <u>400</u> Date: <u>2/25/94</u> Project Name: <u>Stratton Garage</u> Location: <u>Stratton, VT</u> Driller: <u>T&amp;K Drilling</u> TEC Personnel: <u>PSR</u> Boring/Well #: <u>SB-3</u> Sheet <u>1</u> of <u>1</u>					<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">GARAGE</div> <div style="text-align: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>             UST           </div> <div style="margin-left: 20px;">             ● SB-3           </div> </div>			
Depth	Blow Counts				Rec. (in.)	OVM (ppm)	Soil Characterization	As Built Diagram
	0-6	6-12	12-18	18-24				
0-2		off	flights		-	2.3	dark brown silt and fine grained sand	
5-7	12	12	23	36	20	2.3	moist fine to medium grained sand & gravel w/ cobbles	

Drilling Method: HSA  
 Total Well Depth: \_\_\_\_\_  
 Groundwater Depth: \_\_\_\_\_  
 PVC elevation: \_\_\_\_\_

Screen Diameter: \_\_\_\_\_ Length: \_\_\_\_\_  
 Riser Diameter: \_\_\_\_\_ Length: \_\_\_\_\_  
 Slot Size: \_\_\_\_\_  
 Ground Elevation: \_\_\_\_\_

- Notes:
1. Split spoon soil samples are screened for organic vapors via headspace method using a Thermo Environmental Instruments Inc. Organic Vapor Meter Model 580B.
  2. ND indicates Non-Detectable contaminant concentrations as read by the OVM.
  3. Samples are collected using a Split Spoon Sampler unless otherwise indicated.
  4. Split Spoon Sampler has a 2" diameter and is driven using a 140 lb. hammer falling 30 inches.
  5. HSA = Hollow Stem Auger, AR = Air Rotary

*Appendix D*

*Monitoring Well Gauging and Sampling Log*

Stratton Town Garage - Stratton, VT  
TEC Job # 400

Please Initial: KHJ & PDGM

Date: 3/8/94 Arrive Site: 10:45

Depart Site: 2:30

Weather: snow and rain

Temperature: approx 32 F

### Sampling

Wells	Well depth	Depth to G.W.	Time Measured	Total H2O(ft.)	# of Bailers	Sample # (on bottle)	Time Sampled	Notes & Comments (water odor and appearance)
ST-1	13'	4.62	11:57	8.38	29	ST-1-3894-400	1:00	
ST-2	13'	4.00	12:01	9.00	31	ST-2-3894-400	1:03	
ST-3	12'	4.07	12:08	7.93	28	ST-3-3894-400	1:09	petroleum odor
ST-4	13'	3.72	12:03	9.28	32	ST-4-3894-400	1:07	
STDW-1						STDW-1-3894-400	12:10	only one well
Dup of ST-3						ST-02-3894-400	1:11	
Trip Blank						ST-01		

Samples analysed by EPA methods 8240 and TVH

Samples to be FED/EXed to State lab care of Sandy Lewis

### Notes:

- Number of bailers needed to evacuate 3 bore volumes from each well is determined by subtracting Groundwater depth from well depth, then multiply by 3.4.

*Appendix E*  
*Laboratory Data*

RECEIVED MAR 14 1994

Submitted by: K. Jeppesen Phone: 254-3677 Date Collected: 3/08/94  
Report to: TRI-S Env. Testing Custody: N Date Submitted: 3/09/94  
Program #: 41 Activity code: 1495 Date Required: 4/06/94

Notes:

\*\*\*\* Tests Requested \*\*\*\*

W8240

Id	Location	Lab Id	Location
1	st1	6702	st2
3	st3	6704	st4
15	stdw1	6706	st02
17	tb		

RECEIVED MAR 25 1994

3/21/94

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6701 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: stl Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/10/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 98% DB-Toluene . . . . . 102% 4-Bromofluorobenzene . 100%

Notes: Capillary column used with EPA approval.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve



3/21/94

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6702 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
 Location: st2 Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/10/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	7		15		
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 104% D8-Toluene . . . . . 106% 4-Bromofluorobenzene . 100%

Notes: Capillary column used with EPA approval.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

3/23/94  
Revised report

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6703 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: st3 Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/10/94 Over hold? No Dilution factor: 25

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	250	N.D.				
Chloromethane	250	N.D.				
Bromomethane	250	N.D.				
Chloroethane	250	N.D.				
Trichlorofluoromethane	250	N.D.				
Acetone	2500	N.D.				
1,1-Dichloroethene	125	N.D.				
Carbon disulfide	2500	N.D.				
Methylene chloride	125	N.D.				
Methyl-t-butylether (MTBE)	250	N.D.				
1,2-Dichloroethene	125	N.D.				
1,1-Dichloroethane	125	N.D.				
Vinyl acetate	1250	N.D.				
2-Butanone	2500	N.D.				
Chloroform	125	N.D.				
1,1,1-Trichloroethane	125	N.D.				
Carbon tetrachloride	125	N.D.				
Benzene	125	N.D.				
1,2-Dichloroethane	125	N.D.				
Trichloroethene	125	N.D.				
1,2-Dichloropropane	125	N.D.				
Bromodichloromethane	125	N.D.				
4-Methyl-2-pentanone	1250	N.D.				
cis-1,2-Dichloropropene	125	N.D.				
Toluene	125	2300				
trans-1,3-Dichloropropene	125	N.D.				
1,1,2-Trichloroethane	125	N.D.				
2-Hexanone	1250	N.D.				
Tetrachloroethene	125	N.D.				
Dibromochloromethane	125	N.D.				
Chlorobenzene	125	N.D.				
Ethylbenzene	125	2175				
Xylenes	125	8350				
Styrene	125	N.D.				
Bromoform	125	N.D.				
1,1,2,2-Tetrachloroethane	125	N.D.				
Total Volatile Hydrocarbons	2500	51100	E			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 104% D8-Toluene . . . . . 104% 4-Bromofluorobenzene . 100%

Notes: Capillary column used with EPA approval. Xylenes and TVH quantified from 1 to 50 dilution run.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

3/23/94  
Revised report

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6704 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: st4 Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/10/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	134	E			

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 104% D8-Toluene . . . . . 104% 4-Bromofluorobenzene . 104%

Notes: Capillary column used with EPA approval. Sample contains traces of C3 and C4 alkyl benzenes.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

3/21/94

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6705 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: stdwl Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/10/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 100% D8-Toluene . . . . . 106% 4-Bromofluorobenzene . 102%

Notes: Capillary column used with EPA approval.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

3/23/94  
Revised report

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6706 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: st02 Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/11/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	5				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	2000				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	1950				
Xylenes	5	8300				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	19600				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 106% D8-Toluene . . . . . 98% 4-Bromofluorobenzene . 98%

Notes: Capillary column used with EPA approval. Toluene, ethylbenzene, and xylenes quantified from 1 to 50 dilution run.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

3/21/94

Department of Environmental Conservation Laboratory  
Method 8240 - Volatile Organics in Water

GJD

Lab Id: 6707 Report To: TRI-S Env. Testing Phone: 254-3677 Date Collected: 3/08/94  
Location: tb Program: 41 1495 Chain of Custody? No

Notes:

Date Analyzed: 3/11/94 Over hold? No Dilution factor: 1

Parameter	Units are ug/l		Remark Code	Rel % Diff.	Spiked Dups ?	Percent Recovery
	PQL	Result				
Vinyl chloride	10	N.D.				
Chloromethane	10	N.D.				
Bromomethane	10	N.D.				
Chloroethane	10	N.D.				
Trichlorofluoromethane	10	N.D.				
Acetone	100	N.D.				
1,1-Dichloroethene	5	N.D.				
Carbon disulfide	100	N.D.				
Methylene chloride	5	N.D.				
Methyl-t-butylether (MTBE)	10	N.D.				
1,2-Dichloroethene	5	N.D.				
1,1-Dichloroethane	5	N.D.				
Vinyl acetate	50	N.D.				
2-Butanone	100	N.D.				
Chloroform	5	N.D.				
1,1,1-Trichloroethane	5	N.D.				
Carbon tetrachloride	5	N.D.				
Benzene	5	N.D.				
1,2-Dichloroethane	5	N.D.				
Trichloroethene	5	N.D.				
1,2-Dichloropropane	5	N.D.				
Bromodichloromethane	5	N.D.				
4-Methyl-2-pentanone	50	N.D.				
cis-1,2-Dichloropropene	5	N.D.				
Toluene	5	N.D.				
trans-1,3-Dichloropropene	5	N.D.				
1,1,2-Trichloroethane	5	N.D.				
2-Hexanone	50	N.D.				
Tetrachloroethene	5	N.D.				
Dibromochloromethane	5	N.D.				
Chlorobenzene	5	N.D.				
Ethylbenzene	5	N.D.				
Xylenes	5	N.D.				
Styrene	5	N.D.				
Bromoform	5	N.D.				
1,1,2,2-Tetrachloroethane	5	N.D.				
Total Volatile Hydrocarbons	100	N.D.				

Surrogate Percent Recoveries (S=Surrogate recovery out of range)

1,2-Dichloroethane-D4 102% D8-Toluene . . . . . 104% 4-Bromofluorobenzene . 98%

Notes: Capillary column used with EPA approval.

Remarks: E=Estimated Value J=Value may be in Error O=Value outside Standard Curve

*Appendix F*  
*Photographs*